

**Directions: Give the domain and range of each relation and determine if it is a function.**

$\{(2,3)(-1,5)(3,0)\}$ <i>Domain :</i> 1) <i>Range :</i>  <i>Function?</i>
$\{(-3,4)(0,5)(-3,1)\}$ <i>Domain :</i> 2) <i>Range :</i>  <i>Function?</i>
$\{(-4,5)( -4 ,1)(-2, -3 ),( -2 ,-3)\}$ <i>Domain :</i> 3) <i>Range :</i>  <i>Function?</i>
$\{( -1 ,7)(1,-5)(-6,1),(6, -1 )\}$ <i>Domain :</i> 4) <i>Range :</i>  <i>Function?</i>

**Directions: Give the domain of each function.**

$f(x) = x^5 - 5$ 5) <i>Domain :</i>	$g(x) = \frac{5}{x+7}$ 6) <i>Domain :</i>	$h(x) = \frac{3}{x^4 + 8}$ 7) <i>Domain :</i>
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$F(x) = \sqrt{3x-2}$ <b>8)</b> Domain :	$f(x) = \frac{1}{x^2 + 6x + 8}$ <b>9)</b> Domain :	$G(x) = \frac{6}{(x-5)(x+4)}$ <b>10)</b> Domain :
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**Directions: Write a rule for each relation and state the domain and range.**

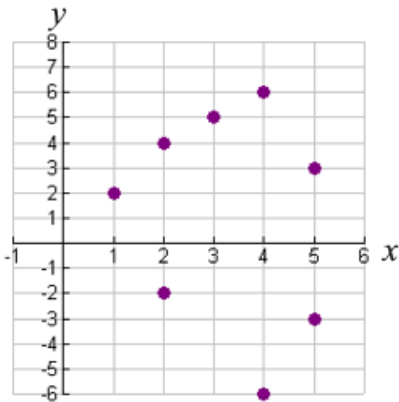
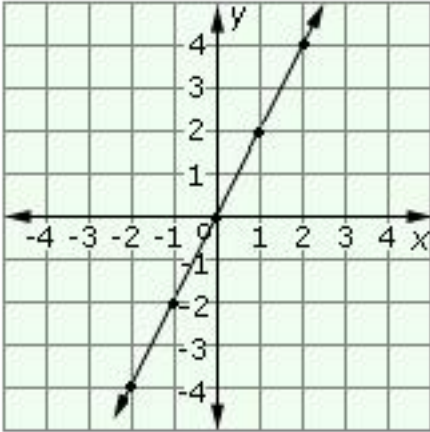
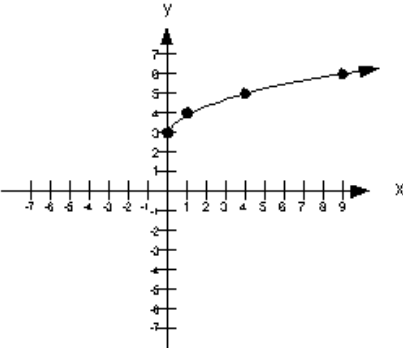
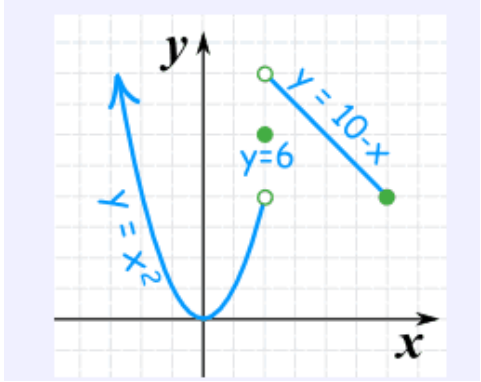
$\{(1,3),(-2,6),(0,0),(4,12)\}$ Rule :  <b>11)</b> Domain :  Range :
$\{(5,0),(2,-3),(-3,-8),(12,7)\}$ Rule :  <b>12)</b> Domain :  Range :
$\{(1,4),(2,7),(3,10),(4,13)\}$ Rule :  <b>13)</b> Domain :  Range :

**Directions: Evaluate each function for the given values.**

<b>14)</b> $g(x) = x + 5$	<b>a)</b> $g(0) =$	<b>b)</b> $g(-3) =$	<b>c)</b> $g(-1) =$	<b>d)</b> $g(4) =$
<b>15)</b> $f(x) = 3 - 4x$	<b>a)</b> $f(1) =$	<b>b)</b> $f(-1) =$	<b>c)</b> $f(0) =$	<b>d)</b> $f(-3) =$
<b>16)</b> $G(x) = -x^2 + 2$	<b>a)</b> $G(1) =$	<b>b)</b> $G(-1) =$	<b>c)</b> $G(3) =$	<b>d)</b> $G(-3) =$

17) $H(x) =  5 - x $	a) $H(0) =$	b) $H(-1) =$	c) $H(1) =$	d) $H(3) =$
18) $F(x) = \frac{6}{x^2 + 3}$	a) $F(0) =$	b) $F(1) =$	c) $F(2) =$	d) $F(3) =$

**Directions: Determine if each graph is a function.**

<p>19)</p> 	<p>20)</p> 
<p>21)</p> 	<p>22)</p> 

**Directions: Given the function and its domain, find the range of the function.**

<p>23) <math>f(x) = 5 - 4x</math> Domain : <math>\{-2, -1, 0, 1, 2\}</math> Range :</p>	<p>24) <math>g(x) = x^2 - 3</math> Domain : <math>\{-3, 0, 3\}</math> Range :</p>
<p>25) <math>h(x) = x^2 - 4x</math> Domain : <math>\{-3, -2, -1, 0, 1, 2, 3\}</math> Range :</p>	<p>26) <math>f(x) = x^2 - 3x + 2</math> Domain : <math>\{0, 1, 2, 3\}</math> Range :</p>

**Directions: Find the indicated values.**

$f(x) = x^2 - 3$	$g(x) = 2 - 3x$
$f[g(1)] =$  <b>27)</b> $g[f(1)] =$	$f[g(-1)] =$  <b>28)</b> $g[f(-1)] =$
$f[g(2)] =$  <b>29)</b> $g[f(2)] =$	$f[g(-2)] =$  <b>30)</b> $g[f(-2)] =$
<b>31)</b> $f[g(x)] =$	<b>32)</b> $g[f(x)] =$

**Directions: Perform the operations of the given functions.**

$f(x) = 3x - 4$	$g(x) = x + 5$
$(f + g)(x) =$  <b>33)</b>	$(f - g)(x) =$  <b>34)</b>
$(f \bullet g)(x) =$  <b>35)</b>	$\left(\frac{f}{g}\right)(x) =$  <b>36)</b>
$(f + g)(-2) =$  <b>37)</b>	$(f - g)(1) =$  <b>38)</b>